Tennessee Department of Environment and Conservation,
Division of Water Pollution Control
401 Church Street, 6th Floor L & C Annex, Nashville, TN 37243
(615) 532-0625

CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)
STATE OPERATING PERMIT (SOP)
NOTICE OF INTENT (NOI)

Type of permit you are requesting: ☐ SOPCD0000 (designed to discharge) ☒ SOPC00000 (no discharge) ☐ Unknown, please advise

Application type: ☒ New Permit ☐ Permit Reissuance ☐ Permit Modification

If this NOI is submitted for Permit Modification or Reissuance provide the existing permit tracking number: ____

OPERATION IDENTIFICATION

Operation Name:	**Red River B Farm**	County:	**Bradley**
Operation Location/ Physical Address:	**8000 Old Eureka Road, Charleston, TN 37310**	Latitude:	**35deg16min 56.11" N**
		Longitude:	**84deg51min 27.35" W**

Name and distance to nearest receiving water(s): **unnamed tributary to Candies Creek ~683 ft.**

If any other State or Federal Water/Wastewater Permits have been obtained for this site, list those permit numbers:

Animal Type: ☒ Poultry ☐ Swine ☐ Dairy ☐ Beef ☐ Other ____

Number of Animals: 112,000 | Number of Barns: 4 | Name of Integrator: Koch Foods

Type of Animal Waste Management: (check all that apply)
☒ Dry
☐ Liquid
☐ Liquid, Closed System (i.e. covered tank, under barn pit, etc.)

Attach the NMP ☒ NMP Attached | Attach the closure plan ☒ Closure Plan Attached | Attach a topographic map ☒ Map Attached

PERMITTEE IDENTIFICATION

Official Contact (applicant): **Randy Branham**	Title or Position:			
Mailing Address: **P.O. Box 1191**	City: Cleveland	State: **TN**	Zip: **37364**	☒ Correspondence ☒ Invoice
Phone number(s): **423-364-6820**	E-mail: **N/A**			
Optional Contact:	Title or Position:			
Address:	City:	State:	Zip:	☐ Correspondence ☐ Invoice
Phone number(s):	E-mail:			

APPLICATION CERTIFICATION AND SIGNATURE (must be signed in accordance with the requirements of Rule 1200-4-5-.05)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and title; print or type	Signature	Date
Red River B		8-9-2012

STATE USE ONLY

Received Date	Reviewer	EFO	T & E Aquatic Fauna	Tracking No.

	Impaired Receiving Stream	High Quality Water	NOC Date

(continued)

NRCS Natural Resources Conservation Service

Comprehensive Nutrient Management Plan (CNMP)
(Version 2, 9/14/2011 Format)

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance for the animal feeding operation. It includes background information and provides guidance, reference information and Web-based sites where up-to-date information can be obtained. Refer to the Producer Activity Document (PAD) for information about day-to-day management activities and recordkeeping. Both this CNMP document and the PAD document shall remain in the possession of the producer/landowner.

Farm/Facility: Red River B
8000 Old Eureka Road
Charleston, TN 37310
423-364-6820

Owner/Operator: Randy Branham

Farm Headquarters Latitude/Longitude: 35°16'56.11" N 84°51'27.35" W

Plan Period: Jan 2012 - Dec 2016

Certified Conservation Planner

As a Certified Conservation Planner, I certify that I have reviewed both the *Comprehensive Nutrient Management Plan* and *Producer Activity Document* for technical adequacy and that the elements of the documents are technically compatible, reasonable and can be implemented.

Signature: Chris D Mosley Date: 8/7/12
Name: Chris Mosley
Title: Senior Project Engineer Certification Credentials: TSP-06-5596

Conservation District

As a Soil and Water Conservation District employee, I have reviewed both the *Comprehensive Nutrient Management Plan* and *Producer Activity Document* and concur that the plan meets the District's conservation goals.

Signature: _____ Date: _____
Name:
Title:

Owner/Operator

As the owner/operator of this CNMP, I, as the decision maker, have been involved in the planning process and agree that the items/practices listed in each element of the CNMP are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: _____ Date: 8-9-2012
Name: Randy Branham

Section 2. Manure and Wastewater Handling and Storage

Signature: Chris D Mosley Date: 8/7/12
Name: Chris Mosley
Title: Senior Project Engineer Certification Credentials: TSP-06-5596

Sections 4. Land Treatment

Signature: Chris D Mosley Date: 8/7/12
Name: Chris Mosley
Title: Senior Project Engineer Certification Credentials: TSP-06-5596

Section 6. Nutrient Management

The Nutrient Management component of this plan meets the Tennessee Nutrient Management 590 and Waste Utilization 633 Conservation Practice Standards.

Signature: Chris D Mosley Date: 8/7/12
Name: Chris Mosley
Title: Senior Project Engineer Certification Credentials: TSP-06-5596

Section 8. Other Utilization Options

Signature: Chris D Mosley Date: 8/7/12
Name: Chris Mosley
Title: Senior Project Engineer Certification Credentials: TSP-06-5596

Table of Contents

Section 1. Background and Site Information

1.1. General Description of Operation

Red River B Farm is a 112,000 bird broiler facility (4 Barns) located in Charleston, TN. The farm receives approximately 5 to 6 flocks per year. Each flock is raised on the farm for 38-42 days after which a de-caking event (approximately 4-5 times per year) or a full cleanout (approximately once per year) of the litter occurs. Based on the steady state bird population, number of flocks and the average weight of the birds, the annual litter production is approximately 940 tons. Three 40' x 40' litter stacking sheds are available for storage of litter from the decaking and full cleanout events. Two of the stacking sheds also have attached dead bird composters. The combined capacity of the litter stacking sheds is approximately 360 tons. All litter produced on the farm is sold to 3rd parties.

1.2. Sampling, Calibration and Other Statements

Litter shall be analyzed on an annual basis for: nitrogen, phosphorus and potassium.

Solid Manure (Poultry)

Collect a composite sample by following one of the procedures listed below. A method for mixing a composite sample is to pile the manure and then shovel from the outside to the inside of the pile until well mixed. Fill a one-gallon plastic heavy-duty zip lock bag approximately one-half full with the composite sample, squeeze out excess air, close and seal. Store sample in freezer if not delivered to the laboratory immediately.

Procedure 1. Sampling poultry in-house - Collect 8-10 samples from throughout the house to the depth the litter will be removed. Samples near feeders and waterers may not be indicative of the entire house and sub samples taken near here should be proportionate to their space occupied in the whole house. Mix the samples well in a five-gallon pail and take a one-pound sub sample, place it in a one-gallon zip lock bag.
Procedure 2. Sampling stockpiled litter - Take ten sub samples from different locations around the pile at least 18 inches below the surface. Mix in a five-gallon pail and place a one-pound composite sample in a gallon zip lock bag.

1.3. Natural Resource Concerns

If checked, the indicated resource concerns have been identified and have been addressed in this plan.

Soil Quality Concerns

	Soil Quality Concern	*Fields*
	No concerns	

Water Quality Concerns

	Water Quality Concern	*Fields*
	No concerns	

Other Concerns Addressed

	Other Concern	*Explanation*
	Regulations	Applying for State Permit

Section 2. Manure and Wastewater Handling and Storage

2.1. Map of Production Area

AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
5400 Etta Burke Ct. Suite 200
Raleigh NC 27606
P: 919.859.0669
www.agriwaste.com

Randy Branham Poultry Farm Headquarters Map

Bradley Co., TN

Export Poultry Facility

Drawn By: Julie Peele
Reviewed By: Chris Mosley
Date: 8/7/12

AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
5400 Etta Burke Ct. Suite 200
Raleigh NC 27606
P: 919.859.0669
www.agriwaste.com

Randy Branham Poultry Farm Soils Map

Bradley Co.,TN

Export Poultry Facility

Soil Types

Cr-Cumberland silty clay loam
Sd-Sequoia silty clay
Se-Sequoia silty clay loam
Sf-Sequoia silty clay loam

Drawn By: Julie Peele
Reviewed By: Chris Mosley
Date: 8/7/12

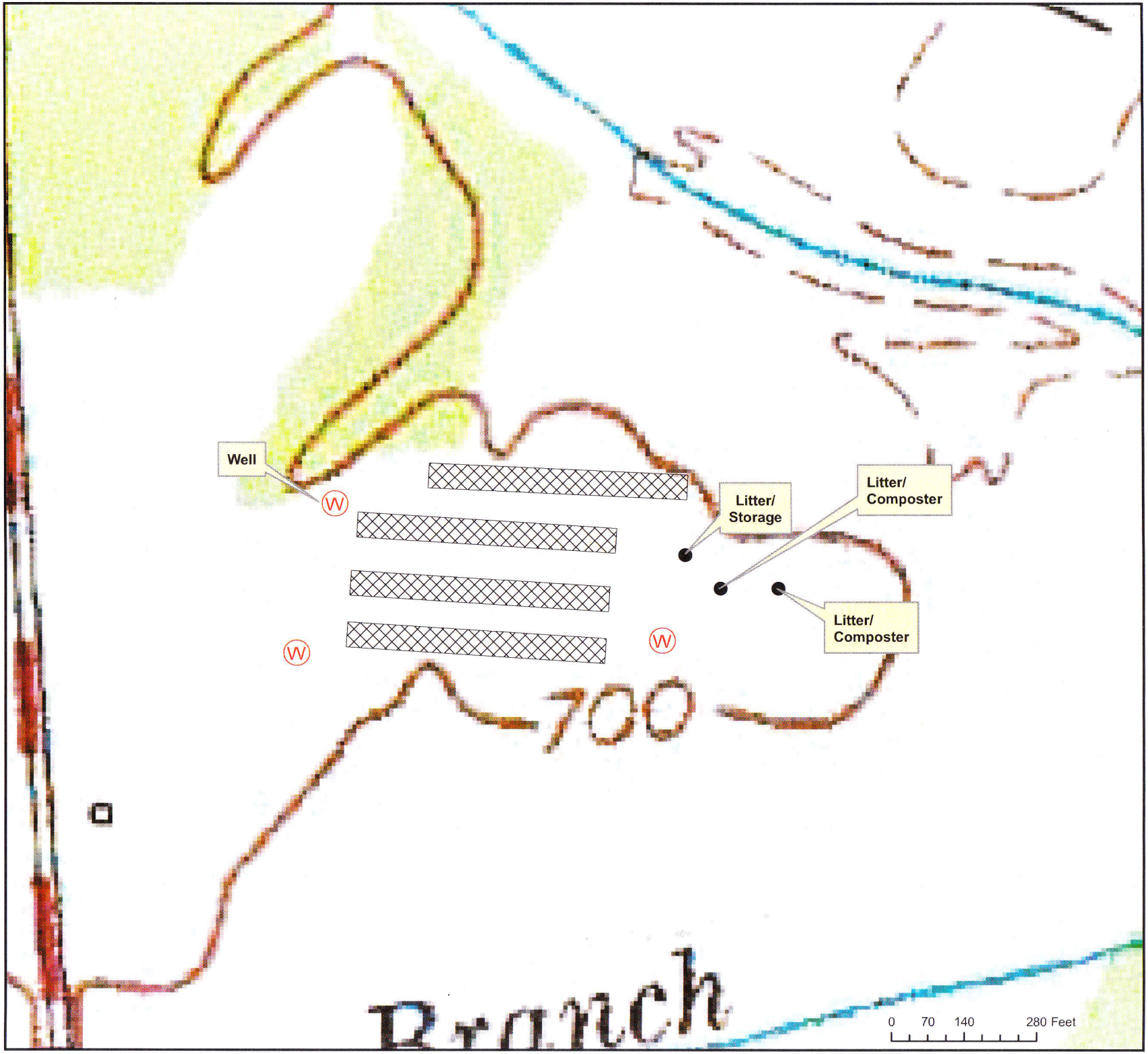
AWT
Engineers and Soil Scientists

Agri-Waste Technology, Inc.
5400 Etta Burke Ct. Suite 200
Raleigh NC 27606
P: 919.859.0669
www.agriwaste.com

Randy Branham Poultry Farm Topographic Map

Bradley Co.,TN

Export Poultry Facility



Drawn By: Julie Peele
Reviewed By: Chris Mosley
Date: 8/7/12

2.2. Production Area Conservation Practices

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

Operation and Maintenance
Covered Litter Shed • Manure will be transferred from the poultry barns and stored in the covered litter shed until it is exported off the farm. • At no time shall litter be stored in a manner which would allow rain/stormwater to come in contact with the dry litter removed from the barns. • Uncontaminated stormwater runoff shall be diverted away from litter and mortality management areas.
Composting Shed See NRCS Standard O&M Plan on following pages.

Daily inspections of all water lines, including drinking and cooling water are required.

Weekly inspections are required for all stormwater diversion devices.

Weekly inspections are also required for the litter stacking shed/composter.

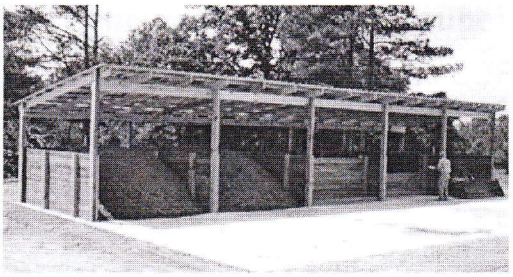
Any deficiencies found as a result of these inspections must be corrected as soon as possible.

Where employees are responsible for work activities which relate to permit compliance, those employees must be regularly trained in the proper operation and maintenance of the facility and waste disposal. Training shall include topics as appropriate such as proper operation and maintenance of the facility, good housekeeping and material management practices, necessary record-keeping requirements, and spill response and clean up. **This training shall occur once every two years.**

COMPOSTING FACILITY

CODE 317

OPERATION AND MAINTENANCE PLAN



The life of this installation can be assured and usually increased by developing and carrying out a good operation and maintenance program. Operation and Maintenance (O & M) is necessary for all conservation practices and is required for all practices installed with NRCS assistance. The land user is responsible for proper O & M throughout the life of the practice and as may be required by federal, state, or local laws or regulations. The composting facility is a treatment component of an agricultural management system for the biological stabilization of organic material.

Operation is defined as operating the practice in compliance with all laws, regulations, ordinances, and easements and in a manner that is beneficial to the environment and will permit the practice to serve its intended purpose. Maintenance includes working to prevent deterioration of the practice, repairing damage, or replacing components that may fail.

Composting has been shown to reduce the populations of coliform bacteria to undetectable levels even in the primary compost. Salmonella is destroyed when proper heating is obtained. In poultry, Newcastle and Infectious Bursal disease viruses are destroyed also.

Operation

Composting is a biological process. It requires a combination of art and science for success. Hence, the operation may need to undergo some trial and error in the start-up of a new composting facility.

For proper poultry composting, correct proportions of carbon, nitrogen, moisture, and oxygen should be present in the mix. Common carbon sources are sawdust or wheat straw. It is desirable because of its bulking ability, which allows entry of oxygen. Other carbon sources that could be used are peanut hulls, cottonseed hulls, sawdust, leaves, etc. If lab testing of the litter or experience indicates that the carbon/nitrogen ratio is adequate (20-35:1 ratio), then litter alone should be sufficient for composting mortality as long as desirable bulking ability is achieved and moisture is properly managed. Moisture management is critical and must be maintained between 40 and 55 percent (Refer to Table 2).

Table 1. Recipe for Composting Broiler Mortality

INGREDIENT	VOLUME	WEIGHTS
Straw	1.0	0.10
Carcasses	1.0	1.0
Litter	1.5	1.2
Water	0.5	0.75

Compost Layering Procedure

1. The first layer is one foot of litter.
2. A 4-6 inch layer of carbon amendment (sawdust is preferred) is added according to the recipe.
3. A layer of carcasses is added. Carcasses shall be laid side-by-side and shall not be stacked on top of one another. Carcasses placed directly on dirt or concrete floors or against bin walls will not compost properly.
4. Water is added (uniform spray).
5. Carcasses are covered with a 6-inch layer of litter.
6. Begin next layer of carcasses with carbon amendment and repeat above steps.
7. When composter is full, cap the 6-inch layer with four additional inches.

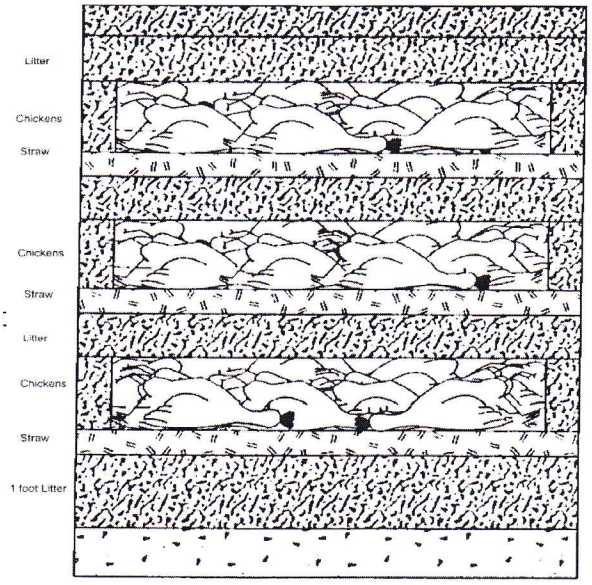


Table 2. Maintain the moisture content at 40 to 55 percent during the composting process as follows:

40 percent	Does not leave your hand moist when squeezed.
55 percent	Will allow about one drop of water to be released when squeezed.
>55 percent	If more than two drops drip from your hand, the material is too moist; therefore, add sawdust or dry carbon source.

Temperature is the primary indicator to determine if the composting process is working properly. A minimum temperature of 130 °F. shall be reached during the composting process. A temperature of 140 °F. is optimum; however, temperatures may range up to 160 °F. If the minimum temperature is not reached, the resulting compost shall be incorporated immediately after land application or recomposted by turning and adding moisture as needed. Compost managed at the required temperatures will favor destruction of any pathogens and weed seeds. Good carcass compost should heat up to the 140° range within a few days. Failure of the compost material to heat up properly normally results from two causes. First, the nitrogen source is inadequate (example wet or leached litter). A pound of commercial fertilizer spread over a carcass layer will usually solve this problem. Secondly, the compost fails when too much water has been added and the compost pile becomes anaerobic. An anaerobic compost bin is characterized by temperatures less than 120°, offensive odors, and black oozing compound flowing from the bottom of the compost bin. In this case, a drier bulking/carbon amendment should be added to dry the mix. Then, the material should be remixed and composted.

It is possible, though unlikely, for the temperature to rise above the normal range and create conditions suitable for spontaneous combustion. If temperature rises above 170°F., the material should be removed from the bin and cooled and spread on the ground to a depth not to exceed six inches in an area away from buildings. Water should be added only if flames occur. If temperature falls significantly during the composting period and odors develop, or if material does not reach operating temperature, investigate piles for moisture content, porosity, and thoroughness of mixing.

After this first stage process, the material should be turned into a second bin and allowed to go through a second heat process. For larger birds, especially turkeys, a third turning may be necessary for complete degradation of the birds. Typically, the process can be considered "done" within 21-28 days from the time the compost is filled for broilers. For turkeys, the process usually requires about 60 days. After the heat process, curing period of one to three months is usually required before the material is stable.

Compost may be land applied after the secondary or tertiary composting. If any animal parts are still in the mix, the material must be incorporated. If immediate application is not possible, the material should be stored using the same requirements as that of stored litter in the Stacking Shed O&M statement.

Necessary operation and maintenance items for this practice include:

- **Inspect facility regularly and when the facility is empty. Replace deteriorated wooden materials or hardware. Patch concrete floors and curbs as necessary to assure water tightness.**
- **Roof structures should be examined for structural integrity and repaired as needed. Exposed metal components should be inspected for corrosion. Corroded metal should be wire brushed and painted as necessary.**
- **Closely monitor temperatures above 165°F. Take action immediately to cool piles that have reached temperatures above 185°F.**
- **COMPOST SHOULD NOT BE STORED WITH DRY MANURE!**
- **Flies, rodents, and other pests are seldom a problem with properly managed composter units. The solid structure of the bins, especially the concrete slab, discourages ground level pests and scavengers from raiding the bins. Most insect larvae are killed at 115 F., a temperature lower than that achieved during efficient composting. At certain times of the year, some flies may be observed on the bin walls. These may be controlled with an insecticide.**
- **Good management practices such as placing the carcasses 6 inches away from the sidewalls, monitoring the temperature to be sure that proper levels are reached, and completing the secondary stage of composting will go far in ensuring pathogen destruction throughout the mixture.**
- **The system is not designed for catastrophic losses resulting from excessive heat, collapse of buildings, loss from disease, etc.**
- **In the event of Catastrophic deaths – disease related, perform the following:**
  - **Notify State Veterinary Office.**
  - **Limit exposure to other birds.**
  - **Prevent visitation by unnecessary people.**
  - **Dead animals should be moved into an approved transport vehicle or an approved storage area or bin.**
  - **Record date of catastrophic deaths, number of deaths, method and location of disposal.**
- **In the event of catastrophic deaths – disaster related, perform the following:**
  - **Notify State Veterinary Office - Animal Emergency Response Coordinator immediately.**
  - **Notify the integrator or farm manager to remove useable animals.**
  - **Remove mortality from the barns/houses and dispose of mortality in accordance with an appropriate plan.**
  - **Record date of catastrophic deaths, number of deaths, method and location of disposal.**

Other:

Tract/Field No.:			
Landowner/Operator Name:		**Review Date:**	
Prepared By:		**Date:**	

2.3. Manure Storage

Storage ID	Type of Storage	Pumpable or Spreadable Capacity	Annual Manure Collected	Maximum Days of Storage
Litter Barns	Poultry manure dry stack	360 Tons	940 Tons	140

Litter production is calculated as follows:

28,000 birds/house x 4 houses x 6 flocks x 2.8 lb/bird ÷ 2000 lb/ton = 940 tons

2.4. Animal Inventory

Animal Group	Type or Production Phase	Number of Animals	Average Weight (Lbs)	Confinement Period	Manure Collected (%)	Storage Where Manure Will Be Stored
Poultry 1	Broiler	28,000	2.8	Jan Early - Dec Late	100	Litter Barns
Poultry 2	Broiler	28,000	2.8	Jan Early - Dec Late	100	Litter Barns
Poultry 3	Broiler	28,000	2.8	Jan Early - Dec Late	100	Litter Barns
Poultry 4	Broiler	28,000	2.8	Jan Early - Dec Late	100	Litter Barns

(1) Number of Animals is the average number of animals that are present in the production facility at any one time.
(2) If Manure Collected is less than 100%, this indicates that the animals spend a portion of the day outside of the production facility or that the production facility is unoccupied one or more times during the confinement period.

2.5. Normal Animal Mortality Management

To decrease non-point source pollution of surface and ground water resources, reduce the impact of odors that result from improperly handled animal mortality, and decrease the likelihood of the spread of disease or other pathogens, approved handling and utilization methods shall be implemented in the handling of normal mortality losses. If on-farm storage or handling of animal mortality is done, NRCS Standard 316, Animal Mortality Facility, will be followed for proper management of dead animals.

Plan for Proper Animal Mortality Management

The following narrative describes how normal animal mortality will be managed in a manner that protects surface and ground water quality.

Dead birds will be transferred to the composting facility within 24 hours after knowledge of death. The procedure outlined in the NRCS Conservation Standard 317 Operation and Maintenance Plan will be followed.

2.6. Planned Manure Exports off the Farm

Month-Year	Manure Source	Amount	Receiving Operation
Mar 2012	Litter Barns	314 Tons	Various 3rd Parties
Jul 2012	Litter Barns	314 Tons	Various 3rd Parties
Oct 2012	Litter Barns	314 Tons	Various 3rd Parties
Mar 2013	Litter Barns	314 Tons	Various 3rd Parties
Jul 2013	Litter Barns	314 Tons	Various 3rd Parties
Oct 2013	Litter Barns	314 Tons	Various 3rd Parties
Mar 2014	Litter Barns	314 Tons	Various 3rd Parties
Jul 2014	Litter Barns	314 Tons	Various 3rd Parties
Oct 2014	Litter Barns	314 Tons	Various 3rd Parties
Mar 2015	Litter Barns	314 Tons	Various 3rd Parties
Jul 2015	Litter Barns	314 Tons	Various 3rd Parties
Oct 2015	Litter Barns	314 Tons	Various 3rd Parties
Mar 2016	Litter Barns	314 Tons	Various 3rd Parties
Jul 2016	Litter Barns	314 Tons	Various 3rd Parties
Oct 2016	Litter Barns	314 Tons	Various 3rd Parties

2.7. Closure Plan

In the event that poultry production at this location ceases, the following will be done within 360 days:

- Any litter/compost currently in storage at the time of closure will be removed and spread on the farm or spread elsewhere according to my Nutrient Management Plan.
- All litter in houses will be removed and spread on the farm or spread elsewhere according to my Nutrient Management Plan.
- All land application of litter will be done at application rates calculated in the Nutrient Management Plan.
- The most current litter analysis will be provided to anyone removing litter from the farm.
- Any dead birds in the houses at the time of closure will be composted.

Section 3. Farmstead Safety and Security

3.1. Emergency Response Plan

In Case of an Emergency Storage Facility Spill, Leak or Failure

Implement the following first containment steps:

a. Stop all other activities to address the spill.
b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
c. Call for help and excavator if needed.
d. Complete the clean-up and repair the necessary components.
e. Assess the extent of the emergency and request additional help if needed.

In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

Implement the following first containment steps:

a. Stop all other activities to address the spill and stop the flow.
b. Call for help if needed.
c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
e. If flow is coming from a tile, plug the tile with a tile plug immediately.
f. Assess the extent of the emergency and request additional help if needed.

Emergency Contacts

Department / Agency	Phone Number
Fire	911
Rescue services	911
State veterinarian	(615) 837-5120
Sheriff or local police	(423) 728-7314

Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
EPA Emergency Spill Hotline	1-800-282-9378
County Health Department	(423) 728-7020
TDEC Division of Water Pollution Control	(615) 532-0625

Be prepared to provide the following information:

a. Your name and contact information.
b. Farm location (driving directions) and other pertinent information.
c. Description of emergency.
d. Estimate of the amounts, area covered, and distance traveled.
e. Whether manure has reached surface waters or major field drains.
f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
g. Current status of containment efforts.

3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before visiting the operation or entering any production or storage facility.

3.3. Catastrophic Animal Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.

Plan for Catastrophic Animal Mortality Management

The following narrative describes how catastrophic animal mortality will be managed in a manner that protects surface and ground water quality. All national, state and local laws, regulations and guidelines that protect soil, water, air, plants, animals and human health must be followed.

Dead birds will be transferred to the composting facility within 24 hours after knowledge of death. The procedure outlined in the NRCS Conservation Standard 317 Operation and Maintenance Plan will be followed.

Important! In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

Authority name: State Veterinarian
Contact name: Dr. Charles Hatcher
Phone number: (615) 837-5120

3.4. Chemical Handling

If checked, the indicated measures will be taken to prevent chemicals and other contaminants from contaminating process waste water or storm water storage and treatment systems.

	Measure
✓	All chemicals are stored in proper containers. Expired chemicals and empty containers are properly disposed of in accordance with state and federal regulations. Pesticides and associated refuse are disposed of in accordance with the FIFRA label.
✓	Chemical storage areas are self-contained with no drains or other pathways that will allow spilled chemicals to exit the storage area.
✓	Chemical storage areas are covered to prevent chemical contact with rain or snow.
✓	Emergency procedures and equipment are in place to contain and clean up chemical spills.

Section 4. Land Treatment

This section is not applicable to this farm. All litter is exported.

Section 5. Soil and Risk Assessment Analyses

This section is not applicable to this farm. All litter is exported.

Section 6. Nutrient Management

6.1. Manure Nutrient Analyses

Manure Source	Dry Matter (%)	Total N	NH_4-N	Total P_2O_5	Total K_2O	Avail. P_2O_5	Avail. K_2O	Units	Analysis Source and Date
Litter Barns		69.1		91.5	86.2	91.5	86.2	Lb/Ton	Composite Sample Analyzed by University of Arkansas Poultry Science Center (9/30/11)

(1) Entered analysis may be the average of several individual analyses.
(2) Tennessee assumes that 100% of manure phosphorus and 100% of manure potassium is crop available. First-year per-acre nitrogen availability for individual manure applications is given in the Planned Nutrient Applications table. For more information about nitrogen availability in Tennessee, see "Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94 (http://wastemgmt.ag.utk.edu/ExtensionProjects/extension_publications.htm).

6.2. Manure Inventory Annual Summary

Manure Source	Plan Period	On Hand at Start of Period	Total Generated	Total Imported	Total Trans-ferred In	Total Applied	Total Exported	Total Trans-ferred Out	On Hand at End of Period	Units
Litter Barns	Jan '12 - Dec '12	157	940	0	0	0	942	0	155	Ton
Litter Barns	Jan '13 - Dec '13	155	940	0	0	0	942	0	153	Ton
Litter Barns	Jan '14 - Dec '14	153	940	0	0	0	942	0	151	Ton
Litter Barns	Jan '15 - Dec '15	151	940	0	0	0	942	0	149	Ton
Litter Barns	Jan '16 - Dec '16	149	940	0	0	0	942	0	147	Ton

AGRICULTURAL DIAGNOSTIC LABORATORY
UNIVERSITY OF ARKANSAS - FAYETTEVILLE
2nd copy : 7-10-12 cv
***MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)

Name:	RANDY BRANHAM	Received in lab:	9/30/2011
Address:	210 KING DEN DRIVE	Mailed:	10/10/2011
City:	CLEVELAND	State,Zip:	TN 37312
County:	BRADLEY	CK#:	5097

Lab. No.	M11336
Sample No.	none given
Animal type	broilers
-age/lbs	none given
Bedding type	shavings/sawdust
Manure type	cake
Sample date	
Age of manure	
pH	7.8
EC(umhos/cm)	14360
% H20	19.88
-on dry basis-	
Total %N	4.31
Total %P	2.49
Total %K	4.44
Total %Ca	3.83
Total %Carbon	35.82
NO3-N, mg/kg	
NH4-N, mg/kg	
-on as-is basis-	
Total %N	3.45
Total %P	2.00
Total %K	3.56
Total %Ca	3.07
Total %Carbon	28.70
NO3-N, mg/kg	
NH4-N, mg/kg	
-lbs/ton on as-is basis-	
N	69.1
P2O5	91.5
K2O	86.2
Ca	61.4
Total Carbon	574.0
NO3-N	
NH4-N	

***all analyses performed on "as-is" basis/ "dry" basis is calculated from moisture content
*lbs/ton P2O5 = %Total P on "as-is" basis multiplied by 20*2.29
*lbs/ton K2O = %Total K on "as-is" basis multiplied by 20*1.2

6.3. Plan Nutrient Balance

	N (Lbs)	P_2O_5 (Lbs)	K_2O (Lbs)
Total Manure Nutrients on Hand at Start of Plan[1]	10,849	14,366	13,533
Total Manure Nutrients Collected[2]	324,770	430,050	405,140
Total Manure Nutrients Imported[3]	0	0	0
Total Manure Nutrients Exported[4]	325,461	430,965	406,002
Total Manure Nutrients on Hand at End of Plan[5]	10,158	13,450	12,671
Total Manure Nutrients Applied[6]	0	0	0
Available Manure Nutrients Applied[7]	0	0	0
Commercial Fertilizer Nutrients Applied[8]	0	0	0
Available Nutrients Applied[9]	0	0	0
Nutrient Utilization Potential[10]	0	0	0
Nutrient Balance of Spreadable Acres[11*]	0	0	0
Average Nutrient Balance per Spreadable Acre per Year[12*]	0	0	0

1. Values indicate total manure nutrients present in storage(s) at the beginning of the plan.
2. Values indicate total manure nutrients collected on the farm.
3. Values indicate total manure nutrients imported onto the farm.
4. Values indicate total manure nutrients exported from the farm to an external operation.
5. Values indicate total manure nutrients present in storage(s) at the end of plan.
6. Values indicate total nutrients present in land-applied manure. Losses due to rate, timing and method of application are not included in these values.
7. Values indicate available manure nutrients applied on the farm based on rate, time and method of application. These values are based on the total manure nutrients applied (row 6) after accounting for state-specific nutrient losses due to rate, time and method of application.
8. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.
9. Values are the sum of available manure nutrients applied (row 7) and commercial fertilizer nutrients applied (row 8).
10. Values indicate nutrient utilization potential of crops grown. For N the value generally is based on crop N recommendation for non-legume crops and crop N uptake or other state-imposed limit for N application rates for legumes. P_2O_5 and K_2O values generally are based on fertilizer recommendations or crop removal (whichever is greatest).
11. Values indicate available nutrients applied (row 9) minus crop nutrient utilization potential (row 10). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.
12. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres (row 11) by the number of spreadable acres in plan and by the length of the plan in years. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P_2O_5 and/or K_2O do not necessarily indicate that the plan was not developed properly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P_2O_5 and K_2O indicate that planned applications to some fields are less than crop removal rates.

Section 7. Feed Management

Koch Foods is responsible for determining feed rations and delivering feed to Red River B Farm.

Section 8. Other Utilization Options

Red River B Farm exports 100% of the litter produced on the farm to 3rd parties. Red River B Farm must:

a) Provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis, consistent with 40 CFR § 412; and
b) Ensure that the recipient sign the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form on the following page. The permitted CAFO must keep a copy of the signed Agreement along with other records required by this permit.

In addition, CAFOs that transfer 100 tons of manure, litter or process wastewater to a third party must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a third party using the form in Section 9 of the Producer Activity Document.

Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO
The conditions listed below help to protect water quality. These conditions apply to litter removed from an AFO. This agreement is for (amount of waste removed, i.e. tons, etc.) _____ of waste, removed on (date)_____, from the facility owned by Randy Branham and located at 8000 Old Eureka Road, Charleston, TN 37310.

A. The litter must be managed to ensure there is no discharge of litter to surface or groundwater.

B. When removed from the facility, litter should be applied directly to the field or stockpiled and covered with plastic or stored in a building.

C. Litter must not be stockpiled near streams, sinkholes, wetlands or wells.

D. Fields receiving litter should be soil tested at least every two or three years.

E. A litter nutrient analysis should be used to determine application rates for various crops.

F. Calibrate spreading equipment and apply litter uniformly.

G. Apply no more nitrogen or phosphorus than can be used by the crop.

H. A buffer zone is recommended between the application sites and adjacent streams, lakes, ponds, sinkholes and wells. The following non-application buffer widths, taken from NRCS Conservation Practice Standard 590, should be used when applicable:

Object, Site	Buffer Width, ft	Situation
Wells	150	Up-slope of application site
	300	Down-slope of application site
Waterbody	30-100	Depending on the amount/quality of vegetation and slope
Public Use Area	300	All
Residences	300	Other than producer

I. Do not apply litter when the ground is frozen, flooded, saturated or on steep slopes subject to flooding, erosion or rapid runoff.

J. Cover vehicles hauling litter, manure and/or process wastewater on public roads.

K. Keep records of locations where poultry litter will be used as a fertilizer.

I, _____ am the person receiving litter and I understand the conditions listed above.

_____ _____
Signature Date

_____ _____
Address Phone Number

Section 10. References

10.1. Publications

Practice Standards

Tennessee NRCS Nutrient Management Standard (590), Jan. 2003
http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc

Tennessee NRCS Compost Facility Standard (317)

10.2. Software and Data Sources

MMP Version	MMP 0.3.1.0
MMP Plan File	RandyBranham.mmp 8/7/2012 11:48:06 AM
MMP Initialization File for Tennessee	6/4/2009
MMP Soils File for Tennessee	8/29/2011
Phosphorus Assessment Tool	2009.02.20
NRCS Conservation Plan(s)	n/a
RUSLE2 Library	n/a
RUSLE2 Database	n/a

Addendum to Nutrient Management Plan:

By my signature below, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO rule (1200-4-5-.14) that apply to my CAFO operation.

1) All clean water (including rainfall) is diverted, as appropriate, from the production area.
2) All animals in confinement are prevented from coming in direct contact with waters of the state.
3) All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
4) All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
5) All records outlined in 1200-4-5-.14(16)d-f will be maintained and available on-site.
6) Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed after April 13, 2006 are or will be located in accordance with NRCS Conservation Practice Standard 313.
7) Drystacks of manure or stockpiles of litter are always kept covered under roof or tarps.
8) An *Annual Report* will be written for my operation and submitted between January 1 and February 15 of each year. It will include all information required by rule [1200-4-5-.14(16)g].

Signature of CAFO Operator: _____ Date: 8-9-12

NRCS Natural Resources Conservation Service

Producer Activity Document (PAD)
(Version 2, 9/14/2011 Format)

The Producer Activity Document (PAD) is part of the Comprehensive Nutrient Management Plan (CNMP) and contains producer-oriented planned management activities and recordkeeping forms. Refer to the CNMP document for more detail, guidance, and reference information. Both this PAD document and the CNMP document shall remain in the possession of the producer/landowner.

Farm/Facility: Red River B
8000 Old Eureka Road
Charleston, TN 37310
423-364-6820

Owner/Operator: Randy Branham

Farm Headquarters Latitude/Longitude: 35°16'56.11" N 84°51'27.35" W

Plan Period: Jan 2012 - Dec 2016

Table of Contents

Section 2. Manure and Wastewater Handling and Storage

2.1. Map of Production Area

Agri-Waste Technology, Inc.
5400 Etta Burke Ct. Suite 200
Raleigh NC 27606
P: 919.859.0669
www.agriwaste.com

Randy Branham Poultry Farm Headquarters Map

Bradley Co.,TN

Export Poultry Facility

Drawn By: Julie Peele
Reviewed By: Chris Mosley
Date: 8/7/12

2.2. Production Area Conservation Practices

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

Operation and Maintenance
Covered Litter Shed • Manure will be transferred from the poultry barns and stored in the covered litter shed until it is exported off the farm. • At no time shall litter be stored in a manner which would allow rain/stormwater to come in contact with the dry litter removed from the barns. • Uncontaminated stormwater runoff shall be diverted away from litter and mortality management areas.
Composting Shed See NRCS Standard O&M Plan in CNMP document.

2.6. Planned Manure Exports off the Farm

Month-Year	Manure Source	Amount	Receiving Operation
Mar 2012	Litter Barns	314 Tons	Various 3rd Parties
Jul 2012	Litter Barns	314 Tons	Various 3rd Parties
Oct 2012	Litter Barns	314 Tons	Various 3rd Parties
Mar 2013	Litter Barns	314 Tons	Various 3rd Parties
Jul 2013	Litter Barns	314 Tons	Various 3rd Parties
Oct 2013	Litter Barns	314 Tons	Various 3rd Parties
Mar 2014	Litter Barns	314 Tons	Various 3rd Parties
Jul 2014	Litter Barns	314 Tons	Various 3rd Parties
Oct 2014	Litter Barns	314 Tons	Various 3rd Parties
Mar 2015	Litter Barns	314 Tons	Various 3rd Parties
Jul 2015	Litter Barns	314 Tons	Various 3rd Parties
Oct 2015	Litter Barns	314 Tons	Various 3rd Parties
Mar 2016	Litter Barns	314 Tons	Various 3rd Parties
Jul 2016	Litter Barns	314 Tons	Various 3rd Parties
Oct 2016	Litter Barns	314 Tons	Various 3rd Parties

Section 3. Farmstead Safety and Security

3.1. Emergency Response Plan

In Case of an Emergency Storage Facility Spill, Leak or Failure

Implement the following first containment steps:

a. Stop all other activities to address the spill.
b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
c. Call for help and excavator if needed.
d. Complete the clean-up and repair the necessary components.
e. Assess the extent of the emergency and request additional help if needed.

In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

Implement the following first containment steps:

a. Stop all other activities to address the spill and stop the flow.
b. Call for help if needed.
c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
e. If flow is coming from a tile, plug the tile with a tile plug immediately.
f. Assess the extent of the emergency and request additional help if needed.

Emergency Contacts

Department / Agency	Phone Number
Fire	911
Rescue services	911
State veterinarian	(615) 837-5120
Sheriff or local police	(423) 728-7314

Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
EPA Emergency Spill Hotline	1-800-282-9378
County Health Department	(423) 728-7020
TDEC Division of Water Pollution Control	(615) 532-0625

Be prepared to provide the following information:

a. Your name and contact information.
b. Farm location (driving directions) and other pertinent information.
c. Description of emergency.
d. Estimate of the amounts, area covered, and distance traveled.
e. Whether manure has reached surface waters or major field drains.
f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
g. Current status of containment efforts.

3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before visiting the operation or entering any production or storage facility.

3.3. Catastrophic Animal Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.

Plan for Catastrophic Animal Mortality Management

The following narrative describes how catastrophic animal mortality will be managed in a manner that protects surface and ground water quality. All national, state and local laws, regulations and guidelines that protect soil, water, air, plants, animals and human health must be followed.

Dead birds will be transferred to the composting facility within 24 hours after knowledge of death. The procedure outlined in the NRCS Conservation Standard 317 Operation and Maintenance Plan will be followed.

Important! In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

Authority name: State Veterinarian
Contact name: Dr. Charles Hatcher
Phone number: (615) 837-5120

Section 9. Recordkeeping Forms

9.1. Producer Activity Checklist

Calendar Year _____

Activity	Jan	Feb	Mar	April	May	June	July	August	Sept	Oct	Nov	Dec
Manure Sampling												
Date / Initials												
Record Manure Volume Storage:	X	X	X	X	X	X	X	X	X	X	X	X
Volume / Initials												
Record Manure Volume Storage:												
Volume / Initials												
Other												
Date / Initials												
Recordkeeping (see forms on following pages)	X	X	X	X	X	X	X	X	X	X	X	X

Notes: An X indicates that the indicated activity is scheduled for that month. Duplicate this form as needed for additional years.

9.2. Inspection/Monitoring Records

Date	Activity Description	Operator/ Inspector	Activity Data

9.3. Manure Exports off the Farm

Manure Source	Date	Amount Gal or Ton	Receiving Operation	Address	Contact	Phone

Section 10. References

10.1. Publications

Practice Standards

Tennessee NRCS Nutrient Management Standard (590), Jan. 2003
http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc

Tennessee NRCS Compost Facility Standard (317)